

Starting from a generic near horizon expansion in any spacetime dimension greater than two we derive all near horizon symmetries and discover a wealth of novel results: 1. Any non-extremal horizon has an infinite set of near horizon symmetries and associated soft hair excitations. 2. The near horizon symmetries can be represented as generalization of the Bondi-Metzner-Sachs algebra. 3. For horizons that are either flat or non-rotating the near horizon symmetries can be represented as Heisenberg algebras, with one quarter of the inverse of Newton's constant playing the role of Planck's constant. 4. Not only black holes, but also cosmological horizons are equipped with soft hair. We discuss implications of soft hair for horizon thermodynamics and entropy, and comment on open problems and further developments.